

to Long Island as a terminus. The sound is not deep and tides not great, this barrier would be and was crossed. The eastern coast is different. The trend of the ice, though slightly deflected towards the east, was in a southerly direction; comparatively little passed off the east coast. Add now a study of Greenland, as it is under continental glaciation conditions and probably exactly as New England was. Peary's exploration shows a range of animals like the musk-ox, arctic wolf and others at Independence Bay, and practically the extreme northern limit of Greenland, and this implies food on which they live. In other words, Greenland under a glacier yet has a shore line of animal and vegetable life. The distribution of *H. hortensis* fits the theory that it is a survivor. The present abodes are such that it could not have been carried from one to the other and not have found a home on the mainland more than it has. On the other hand Grand Manan, outer islands in Casco Bay, the extremity of Cape Ann and Cape Cod, are places that would be last resorts. A more exhaustive treatment of the subject would deal with elevation and subsidence, possible islands or land in the east now submerged. The stronger tides that would break up a mass of ice extending seaward. I leave these topics and present only the simple suggestion.

A NEW SPECIES OF PERIPLOMA FROM CALIFORNIA.

BY WILLIAM HEALEY DALL.

Periploma sulcata n. s.

Shell rotund, white, with the left valve flatter, thin, sculptured with numerous, close-set, irregularly concentric, more or less interrupted, low ridges, separated by subequal shallow interspaces; the surface is also microscopically shagreened, and there is a low rib extending from the beak to the lower margin of the ill-defined rostrum and an ill-defined furrow radiating from the beak toward the anterior base, in the right valve; beaks low, distinctly fissured; anterior dorsal hingeline rounded, posterior ditto, shorter, nearly rectilinear, forming with the elevated rib a subtriangular space which is free from the undulations which cover the rest of the shell; interior shining, hardly nacreous, the muscular impressions very small, the pallial line obscure; chondrophores prominent, spoon-shaped, extend-

ing obliquely forward, and with their connecting resilium sustaining a proportionately large triangular lithodesma; the chondrophores are supported behind by well-developed clavicular props, which are inserted posteriorly on the surface of the valve below the linear hingeline. Length 32, height 27, diameter of right valve 6 and of the left valve 4 mm.

This elegant shell, in a somewhat damaged condition, was thrown upon the beach at San Pedro, Cal., after one of the heavy winter storms and collected by Mrs. T. S. Oldroyd, to whom we owe so many additions to the fauna of this region.

This species is, we believe, the first *Periploma* known to possess an undulated sculpture, and bears to those of the ordinary type such a relation as that of *Cyathodonta* to *Thracia* or *Labiosa* to *Raeta*. The differences of sculpture and in the form of the lithodesma suggest that, as in the case above cited, *P. sulcata* is entitled to a sectional name for which *Halistrepta* is proposed.

A NEW DENTALIUM FROM CALIFORNIA.

BY WILLIAM J. RAYMOND.

Dentalium vallicolens n. sp.

Adult shell large, rather slender, moderately curved posteriorly, the latter half nearly straight; cream-white, often yellowish toward the mouth, shining where not eroded, earlier portion usually dull and chalky because of erosion; growth-lines fine, irregular, distinct, rarely an encircling groove due to repaired fracture; at the apex there are longitudinal, low, rounded, inconspicuous threads, of which seven or eight are more prominent and three to six in each interspace are less prominent; these die out, and fine, superficial striae appear, visible under the glass and continued to the mouth of the shell, seven or eight per millimeter of circumference; aperture simple, circular, mouth slightly oblique.

Two specimens measure: length 64.5, diam. of aperture 5.3, of apex 1.5, at middle 4.6, height of arch from chord 2.5 mm.; length 64.0, diam. of aperture 4.7, of apex 1.4, at middle 4.2, height of arch from chord 3.0 mm.

Young shell strongly curved, very slender for the first eight or ten millimeters of length, then rapidly enlarging; at first seven or